

**PX-0417**

# Product Information Management

## Overview and Product Description

- Content+ Advanced
- Content+ Supplier Portal
- Catalog+

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The contents of this document represent an overview of the functionality of Content+ Advanced®, Content+ Supplier Portal® and Catalog+® as of the date of publication.

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U.S. Pats. 6,023,683; 6,055,516; 6,505,172; 6,892,185; 6,182,127; 6,510,459; 7,047,211; 7,254,581 and corresponding foreign patents and patents pending.

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**Product Information Management**

Business today depends on information.  
As a result information management - and product information management in particular - have become as important as people management and cash management.

In all three cases, poor controls and poor management lead directly to lost revenue.

**Defining Product Information Management**

Good product information management ensures that all the information, characteristics and attributes of individual products are accurate and consistent throughout the supply chain.

**Where's The ROI?**

For example, many organizations have implemented eProcurement and have not seen the intended return on investment.

For them, their eProcurement engine works, but it's out of gas, because product content is the fuel that drives eProcurement.

The engine can be as powerful and efficient as you could want, but if it's out of gas, it serves no purpose.

**The Need For Good Content**

In the supply chain world, product information management sits squarely between buyers and sellers.

Both depend on good product content for efficient e-commerce.

**Why?**

Without good content, eProcurement users can't find what they need, either because the data doesn't exist or it can't be found when descriptions are bad or incomplete.

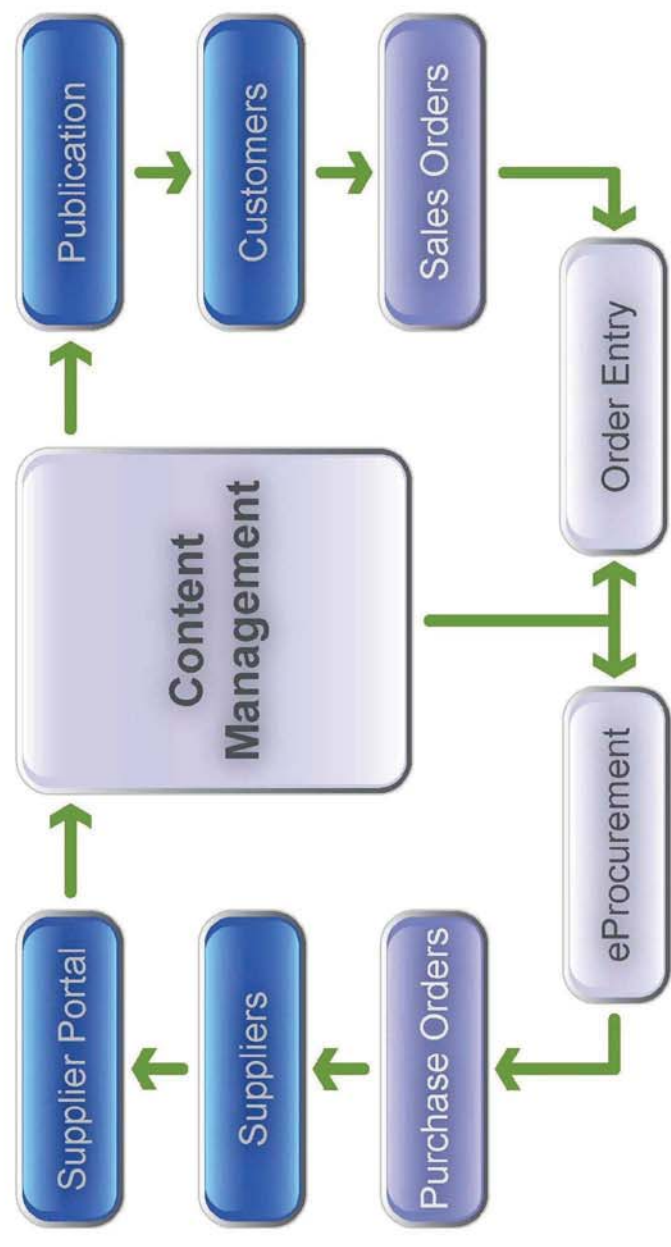
Either way, if searches turn up no result, the user often turns to an off-catalog buy for

something that was or should have been available at a preferred price.

- This creates lost revenue for the buyer in the form of higher costs.

Poor content also affects companies that sell their products online. If catalog content is bad, and buyers go elsewhere to find what they need, the entire sale is lost.

- If not corrected or managed, this leads to more than just lost revenue, but eventually to loss of market share.

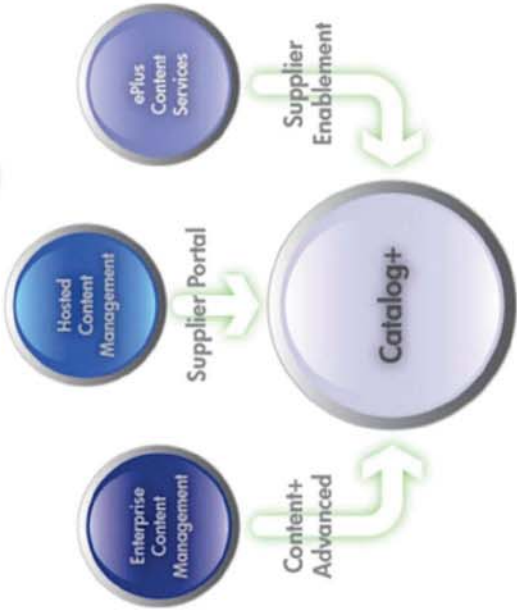




Solution Set

To meet this need, ePlus has developed a comprehensive suite of products and services for Product Information Management.

Product Information Management



It includes a Supplier Portal for working with suppliers, content management for working with data, services for both suppliers and customers, and a Catalog to hold the data.

Today, our knowledge base has more than 500,000 pattern recognition rules covering more than 64,000 product classifications, to cost effectively manage product information.

Enterprise Content Management

Content+ Advanced is our patented software that sits behind your firewall, turning bad product data into usable clean data.

Hosted Content Management

This is our Supplier Portal, providing a simple way for suppliers to onboard their catalogs to customers.

Content Services

At your option, ePlus can perform the data collection and cleansing, manage the Supplier Portal, and build your catalog for you.

Catalog+

This is the result of all the work. Whether the data was provided via Content+ Advanced, the Supplier Portal, or ePlus services - it goes to Catalog+, designed specifically to your needs.

Differentiators

Scalability

ePlus has processed millions of items, offering full text-based and parametric searching, and has comprehensive software technology that supports more than 100 production sites every day.

Maturity

ePlus has provided Content Services to a wide variety of industries for over a decade. We are one of the few providers that has deep experience and extensive tools in data conversion.

Our philosophy is to process data once and publish it to many different databases and spreadsheets as well as outputting XML.

Flexibility

We create aggregated supplier catalogs using either buyer or supplier data.

We can also augment this data with our own product databases.

Our Content+ solution integrates with all applications from buyers and sellers, with our Content and Catalog technology sitting underneath.

Enterprise Content Management

For most organizations, content management is the foundation of all spend management and supply chain solutions.

From sell-side order entry systems to buy-side eProcurement applications and spend analysis systems, rich, unified, and parametrically searchable content is the critical ingredient to reduce costs, improve supply chain visibility, and increase supplier performance.

Without normalized, enriched, and organized content, costs increase, users and customers become frustrated, and related applications can't be utilized to their full potential.

Content+ Advanced is patented software that enables you to efficiently manage your product content information across your enterprise.

Features

Common Language Generator transforms product data into a structured, normalized state recognizing millions of permutations to eliminate duplicate and inconsistent information.

Rules are then applied to ensure the product is described in a uniform manner according to industry standards or your own internal self-defined schema.

Work Process Manager configures standard work flows for data capture and syndication, using comprehensive approval and change management functions and flexible role-based administration.



Content+ Knowledge Base leverages the accumulated intelligence of hundreds of catalog implementations, and automatically categorizes goods and services in the majority of industries.

It currently contains more than 500,000 patterns across 64,000 families of goods and services.

Syndicator distributes customized catalog content to virtually any third-party eProcurement, ERP or accounting system.

Schema Management defines attributes to ensure parametric searches yield the maximum results.

Open Content Framework is an extensible information schema that structures and classifies catalog content into a standard table of contents.

The schema enables businesses to define catalogs in their own structure or any of the industry standards.

Item Maintenance further enhances and maintains product descriptions, images, and attributes to ensure that content is rich and easily searchable.



## Hosted Content Management

A major stumbling block to many eProcurement installations is the lack of good content, often caused by slow supplier adoption, resulting in lower user adoption of the application.

The Content+ Supplier Portal takes a straightforward and simple approach to this problem so that supplier adoption is significantly accelerated.

Many ePlus customers have used the Supplier Portal to enable multiple suppliers in a short amount of time.

### Features

Add Content - ePlus offers three options to add content to the Portal

- direct data entry
- electronic file import
- FTP.

Pattern Recognition - Patented technology interprets product information, automatically assigning items to commodity categories.

Search Catalogs - Comprehensive searching by keyword, product category or sub-category.

Compare Products - Display product information for multiple commodities in a table format, and compare descriptions, pricing, manufacturers, and other attributes.

Shopping Cart Experience - keeps the entire shopping experience in a single location.

### Benefits for Buyers

- Enable suppliers to quickly come on board and self-author their products specifically for your organization.
- Let requisitioners work in their own buying culture and find all of the products they need in a single hub – with a single look and feel, regardless of supplier branded products or different selling cultures.
- Accurately analyze your spend, and negotiate better sourcing of goods.
- Maximize the return on your eProcurement investment. When users don't find what they need, they buy off-contract.

### Benefits for Suppliers

- Self-author your products without having to change branded information or create a new export application for each buyer.
- Load your products and classify them to reflect the buying organization's culture.
- Reduce overhead, improve negotiations, and gain exposure by presenting updated product information directly in the Portal.
- Syndicate products to other buyers using ePlus services and solutions.
- Increase sales and the opportunity to grow your business.

Location Specific Pricing - this allows suppliers to maintain a single item with multiple prices, and in multiple currencies.

In this way, global procurement contracts can be maintained with minimum overhead.

PO Routing - the Supplier Portal accepts purchase orders from your procurement application and routes them to the supplier as either XML, email or efax.

Catalog Administration - emails are sent to Catalog Administrators when any change or addition is made to the catalog. They can then approve, reject, or edit the change.

Accurate Content - View and search the catalog from your customers' perspective and ensure the best experience by making an intelligent assessment of content quality.

Images and Attachments - Add multiple images and attachments, in any file format, to enhance the richness of the content.

Dashboard - Comprehensive drill-downs, and multiple export formats to support integration to external applications.

Full Audit Tracking - The Supplier Portal maintains a complete history of the item from the time of creation.

Expanded Reporting - The Supplier Portal provides multiple reports, such as item status, commodity and sourcing decisions, content quality, user views and approvals.

User Maintenance - Set up product views (eg, by commodity group) and Shopper Groups (based upon a shared location, commodity, or a combination thereof).



## Supplier Enablement Services

Time is money. Every month you lose in getting your suppliers enabled means another month of users not finding what they need, and buying off-contract.

Every month you lose in getting your suppliers enabled means another month of lost savings savings, which were the justification of your eProcurement project.

- Users who find the shopping experience fast and simple come back for more.
- And that depends on the quality of the catalog content, and the robustness of the search technology for finding items.

Content+ Services are designed to bring your suppliers on board for you.

- You can elect to manage the process yourself at any point, but most customers realize that they save more money by having ePlus manage the on-boarding initially, then taking over themselves once the bulk of the catalog data has been uploaded.

Services include

- project and infrastructure planning and management
- turnkey content aggregation
- data validation
- product classification
- description standardization and normalization
- data enrichment.

## Importance of Clean Data

Managing the flow of supplier data into a catalog can be challenging.

- Even when data is available electronically, it is usually unsuitable for eCommerce (for instance, it may contain abbreviations and acronyms).

ePlus helps those organizations that need Product Information Management but have neither the time, the inclination, nor the internal skill sets to do it themselves.

- If it's not their core competency, it makes sense to have ePlus perform the services, at least initially.
- We employ the components of our Product Information Management suite, specifically the Supplier Portal, and work with the suppliers by providing them with a cost-effective approach to providing their content online.
- Then, depending on the data, Content+ Advanced converts it into clean data.

Provide suppliers with an intuitive tool to increase their own sales, and you're sure to have eager involvement.

- And having suppliers willing and able to participate is the key to realizing your own eCommerce initiatives.

## Differentiators

Leading Edge Technology - The Supplier Portal streamlines self-authoring of content by enabling suppliers to upload and maintain their own catalogs.

Our technology gives suppliers the means to convert raw product data into a manageable, searchable catalog.

Using that catalog, requisitioners can find products with a few mouse clicks.

Easy Integration - The Supplier Portal is a flexible, open application that integrates with virtually any platform.

Our secure hosting facilities require no additional software installation or interfaces.

You have immediate access to the Supplier Portal with just a standard web browser.

Flexibility - Whatever your catalog schema, our system can be customized to meet your buying and reporting needs, and the captured data is linked to your commodity code structure, driving better spend analysis.

Manage by Exception - Before changes by suppliers go into effect, you can route them to the appropriate review approval cycle.

Content+ supports validation rules that monitor the products as users interact with the system, ensuring that all of the business requirements of the products are fulfilled.



## Supplier Enablement Considerations

Supplier Enablement is the on-ramp to Content Management – it is the front-end of the flow of processes and data, and the necessary first step towards complete Product Information Management.

Rule 1 - eProcurement is only effective when people actually use it.

Rule 2 - The biggest inhibitor to effective eProcurement is poor catalog content.

Rule 3 - The main contributor for poor catalog content is lack of supplier enablement.

Considerations hinge on a number of variables:

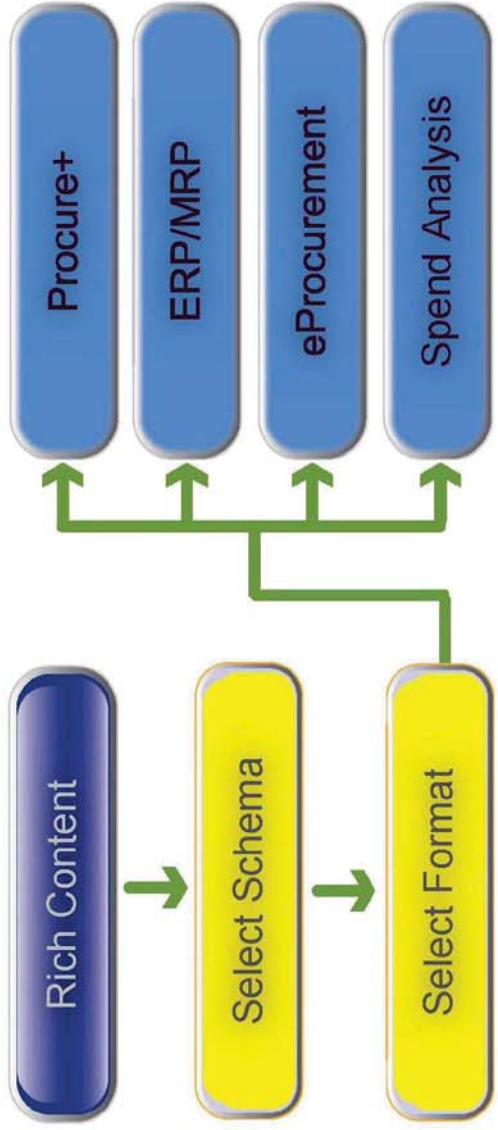
Diversity of Sources - Often, data is in multiple sources, such as ERP for products, marketing for images, pricing elsewhere.

Format of Data - Formats may range from pre-built electronic catalogs to paper documents, enterprise databases, and spreadsheets.

Quality of Data - Misspellings, synonyms, omissions, duplications, redundancies, abbreviations, and non-standard names are all causes of bad data.

Degree of Control - Owners of source data may have requirements for control of both the process of data capture and the quality and completeness of their catalog entries, all of which need to be addressed.

## Content Syndication and Publication



The flow of data into a catalog needs to be managed. Supplier enablement supports collaboration between catalog managers and data owners.

The greatest challenge comes from external suppliers.

- Data capture processes and lack of control can deter a supplier from providing information to a competitive market.

Being able to assure your suppliers that their data is protected helps to alleviate their concerns, and encourages participation.

eProcurement initiatives fail because of poor supplier adoption.

The cause of poor supplier adoptions is usually supplier resistance.

- So it is crucial to provide a streamlined process for data submission and assurance that their products will be properly represented in the catalog.

Internal sources share many of the difficulties of supplier enablement.

- One key requirement is an efficient data capture method capable of dealing with the formats and structures of all sources, for legacy and open systems.



## Catalog+

Catalog+ is the net result of the product information management initiatives, such as Content+ Advanced and/or the Supplier Portal.

The purpose of Catalog+ is to have a single, multi-supplier catalog with rich data, searchable attributes, and a consistent commodity schema which can be used to support eProcurement initiatives.

Catalog+ puts the horse before the cart - define what you need, then see where it's available. It just makes sense.

All of this is possible because of the initial work that went into building Catalog+:

- Normalized product descriptions support partial searches, synonyms, and key word
- A hierarchical commodity schema supports drill down from top level to the lowest level
- Searching on multiple attributes refines a search with thousands of possible items down to a handful

Catalog Search with Drop Downs

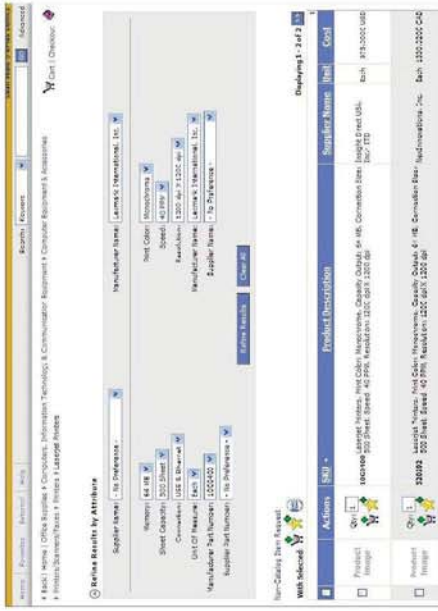


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## Features

- Catalog+ can be used to support any eProcurement application, including Procure+.
- As a hosted site, it can act as a punch-out site from Procure+, Oracle, SAP, and other eProcurement offerings.
- Powerful search methods
  - Keyword
  - 'did you mean'
  - parametric
  - navigation and drill down
- Single point for beginning all item searches, including punch out catalogs, hosted catalogs, favorites, and non-catalog items.
- Supports all major punch out protocols and integrates seamlessly with both procurement and PIM systems.
- Consistent presentation of data regardless of catalog source.
- Supports search in multiple languages.
- Cut through thousands of items to find the few you need, by searching on multiple attributes at one time.
- Compare the results side by side, including all attributes and images.

## Parametric Searching



## Product Comparison



## Item Detail



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